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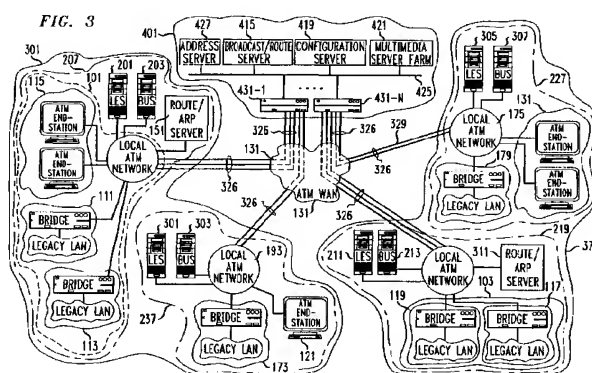
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(54) Method and apparatus for interconnecting lans

(57) A so-called "ELAN contronect network" is employed to interconnect sub-ELANs to form an ELAN. More specifically, the "ELAN contronect network" is a separate network for interconnecting the servers of the sub-ELANs, where a sub-ELAN is a part of an ELAN having its own LES and BUS that may also be configured as a stand-alone ELAN. Each of the sub-ELANs is connected to the ELAN contronect network via a point-to-point connection-oriented connection, e.g., an asynchronous transfer mode (ATM) connection and the ELAN contronect network is configured to present itself to each of the servers of the sub-ELANs as clients thereof. In a particular embodiment of the invention, the ELAN contronect network includes an address server, a broadcast/route server, a configuration server, multimedia

servers, and at least one LAN hub interconnected over a high-speed backbone. The address server contains an address data base for performing address resolution between the at least two addresses of each ELAN endpoint in response to requests for such translations. The broadcast/route server receives data packets for broadcast to a different sub-ELAN from which the packets originated and broadcasts the received data packets to at least one other sub-ELAN. The broadcast/route server also recognizes that a packet which is a broadcast packet at layer 2 is actually a request for an address resolution at layer 3. If so, the broadcast/route server collaborates with the address server to perform the necessary address resolution and insures that a response is sent only to the client originating the request.





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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 1481

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	DATA COMMUNICATIONS, vol. 23, no. 12, 1 September 1994, pages 66-70, 72, 74, 76, 78, 80, XP000462385 "SWITCHED VIRTUAL NETWORKS INTERNETWORKING MOVES BEYOND BRIDGES AND ROUTERS"	1-4,6, 8-16,20, 21	H04L12/46
Y	* the whole document *	5	
X	IEEE COMMUNICATIONS MAGAZINE, vol. 32, no. 3, 1 March 1994, pages 86-98, XP000442191 NEWMAN P: "ATM LOCAL AREA NETWORKS" * the whole document *	1-4,6, 8-21	
Y	IEEE MULTIMEDIA, vol. 1, no. 1, 21 March 1994, pages 37-46, XP000440887 RAMANATHAN S ET AL: "ARCHITECTURES FOR PERSONALIZED MULTIMEDIA" * page 42, right-hand column, line 17 - line 49 *	5	
A	DATA COMMUNICATIONS, vol. 23, no. 13, 21 September 1994, pages 95-98, 100, XP000465391 JEFFRIES R: "ATM LAN EMULATION: THE INSIDE STORY THE ATM FORUM'S LAN EMULATION SERVICE MAKES IT POSSIBLE TO SHIP UPPER-LAYER PROTOCOLS OVER ATM CONNECTIONS WITHOUT MODIFYING LEGACY SOFTWARE" * the whole document *	1-21	
<div>TECHNICAL FIELDS SEARCHED (Int.Cl.6)</div> <div>H04L</div>			
<div>The present search report has been drawn up for all claims</div>			
Place of search		Date of completion of the search	Examiner
THE HAGUE		9 December 1996	PEREZ PEREZ J. C.
<div>CATEGORY OF CITED DOCUMENTS</div> <div> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document </div>			

EPF FORM 150 03.82 (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,
namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,
namely:

See sheet B.

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,
namely claims:
- ☒ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,
namely claims: 1 - 21



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EP 96301481.6 -B-

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-21 : Apparatus for interconnecting a plurality of sub-emulated local area networks
2. Claim 22 : A method for handling a layer-3 packet containing a broadcast indication at layer-2